

PROJECT NUMBER: 1811
PROJECT TITLE: Process Chemistry Development
PROJECT LEADER: S. E. Wrenn
PERIOD COVERED: November, 1989

I. PROJECT ART - pH ADJUSTMENT OF PRE-EXTRACTED FILLER

- A. Objective: To replace AB with a suitable agent which would meet chemical, subjective and processing qualifications as a pre-treatment of ART filler.
- B. Results: Trials were made in Semi-works to replace the AB with ammonium hydroxide as a pre-treatment on ART strip. Because ammonia has a higher solubility than AB, the needed base could be added and result in an OV of <21%. ART strip at 16% OV was sprayed with ammonium hydroxide solution, however, the majority of ammonia was not retained on the tobacco.
- C. Plans: Other alternatives to AB are being investigated in the laboratory.

II. PROJECT ART - NEW BLENDS

- A. Objective: To characterize new ART blends and blend components by titration analysis.
- B. Results: Twenty-four hour titration analysis of various ART blends and blend components were performed to determine buffer capacities which can be directly related to extractability. Titration of the blends indicated that an increase in buffer capacity was related to the increase in burley content.
- C. Plans: Evaluate any new strip blends used in the ART process. Use the information from the titration curves to predict performance of alternate bases. Evaluate stem material by titration analysis.

III. MENTHOL GLUCOSE CARBONATE

- A. Objective: To formulate menthol glucose carbonate (MGC)/solvent system with desirable physical and chemical characteristics to allow direct application to a cigarette rod.
- B. Results: A new batch of MGC was produced at Lee Labs in Petersburg under direction of Bill Edwards (Chemical Research). Samples from various process stages will be evaluated for direct application onto a cigarette rod.
- C. Plans: Analyze samples of MGC from the various distillations stages for physical properties.

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